AMENDMENTS

A single version of all claims that are, or were, in the application, marked up to show all the changes relative to the previous version of the claims, is now set forth, with deleted text shown by ~~strikethrough~~ and added text shown by underlining:

1. (Allowed) A computer-implemented method for managing inventory of similar items in a supply chain, the method comprising:

(a) determining a flow path for items in a supply chain, wherein the flow path comprises at least one operation;

(b) receiving inventory data for items at each operation;

(c) storing the inventory data;

~~(d) determining a demand factor for the items, wherein the demand factor is~~ based at least in part on inventory data comprising an expected demand for at least one item in the supply chain;

(e) determining a cost factor for the items, wherein the cost factor is based at least in part on inventory data comprising a cost associated with an item in the flow path;

(f) based in part on the demand factor and the cost factor, determining an exchange curve for the items, wherein each point along the exchange curve corresponds to a potential inventory decision associated with operating at a particular cost and expected demand; and

(g) displaying a portion of the inventory data for the items and the exchange curve, wherein selection of at least one point along the exchange curve corresponds to an inventory decision associated with operating at a particular cost and expected demand.

2. (Allowed) The computer-implemented method of Claim 1, further comprising:

(h) displaying at least one inventory decision with respect to the items in the supply chain;

(i) receiving a user input corresponding to the inventory decision; and

(j) depending on the inventory decision, implementing the inventory decision with respect to the items at an operation.

3. (Allowed) The computer-implemented method of Claim 2, wherein the inventory decision is selected from a group comprising at least one of the following: make an item to order or make an item to stock.

4. (Allowed) The computer-implemented method of Claim 1, wherein (d) determining a demand factor for the items comprises at least one of the following: determining an expected demand for a finished good over a predefined amount of time and an uncertainty measure for the expected demand, determining an expected number of orders for the items over a predefined amount of time and an uncertainty measure associated with this demand, determining a value based at least in part on at least data obtained from a ERP system, determining a value based at least in part on at least data obtained from a MRP system, or determining a value based at least in part on at least data associated with a bill of material.

5. (Allowed) The computer-implemented method of Claim 1, wherein (e) determining cost factor for the items comprises at least one of the following: determining a cost to a user associated with an item in the flow path, determining a total cycle stock cost for the items, determining an acquisition cost associated with an item in an inventory,

determining a holding cost for an item in an inventory, determining a penalty cost for not meeting a demand for an item in an inventory, determining a salvage cost for a item procured for an inventory, or determining a disposal cost for an item in an inventory.

6. (Allowed) The computer-implemented method of Claim 1, wherein (f) based in part on the demand factor and the cost factor, determining an exchange curve for the items comprises:

comparing a cycle stock inventory cost of the items in the supply chain with a number of orders for the items over a predefined period of time.

7. (Allowed) The computer-implemented method of Claim 1, wherein (f) based in part on the demand factor and the cost factor, determining an exchange curve for the items comprises:

determining multiple exchange curves for the items.

8. (Allowed) The computer-implemented method of Claim 2, further comprising:

(k) determining a reorder point and a reorder quantity for the items.

9. (Allowed) The computer-implemented method of Claim 1, further comprising:

(h) determining investment in a safety stock and an expected number of stock outs over a period of a predefined amount of time;

(i) based on investment in the safety stock and expected number of stock outs per period of a predefined amount of time, determining a penalty cost curve; and

(j) displaying a portion of the inventory data for the items and the penalty cost curve.

10. (Allowed) A computer-implemented method for managing inventory of different types of items in a supply chain, the method comprising:

(a) receiving inventory data for items of a first type at an operation;

(b) receiving inventory data for items of a second type at an operation;

(c) storing the inventory data for the items of the first type and second type;

(d) determining demand factors for the items of the first type and second type, wherein the demand factors are based at least on inventory data comprising expected demands for the items of the first type and second type;

(e) determining cost factors for the items for the items of the first type and second type, wherein the cost factors are based at least on inventory data comprising costs associated with the items of the first type and second type;

(f) based in part on the demand factors and the cost factors, determining a first exchange curve for the items of the first type and a second exchange curve for the items of the second type, wherein each point along the first exchange curve and second exchange curves corresponds to potential inventory decisions associated with operating at a particular cost and expected demand for the items of the first type and for the items of the second type; and

(g) displaying a portion of the inventory data for the items of the first and second types, and the exchange curves for the items of the first and second types, wherein selection of at least one point along each of the exchange curves corresponds to an inventory decision associated with operating at a particular cost and expected demand for the items of the first type and for the items of the second type.

11. (Allowed) A computer-implemented method for managing lot sizes of similar items in a supply chain, wherein the supply chain comprises at least one station, the method comprising:

(a) determining an initial lot size for items at a first station;

(b) receiving routing data for items at each station;

(c) storing the routing data;

(d) based on the routing data, determining a cycle time for the items flowing from the first station through the supply chain;

(e) based on at least the cycle time for the items flowing from the first station through the supply chain, selecting a desired cycle time for the items; and

(g) based on at least the selected desired cycle time for the items, adjusting the initial lot size for the items at the first station.

12. (Allowed) A computer-implemented method for managing lot sizes of multiple types of items in a supply chain, wherein the supply chain comprises at least one station, the method comprising:

(a) determining an initial lot size for a first type of item at a first station;

(b) determining an initial lot size for a second type of item at the first station;

(c) receiving routing data for each type of item as the items flow from the first station through the supply chain;

(d) storing the routing data;

(e) based on the routing data, determining a cycle time for each type of item flowing from the first station through the supply chain;

(f) based on at least the cycle time for the items flowing from the first station through the supply chain, selecting a desired cycle time for each type of item; and

(g) based on at least the desired cycle time for each type of item, adjusting the initial lot size for each type of item at the first station.

13. (Allowed) The computer-implemented method of Claim 12, further comprising:

repeating elements (a) – (g) as needed.

14. (Allowed) The computer-implemented method of Claim 12, wherein the selected desired cycle time is lower than the initial cycle time measured for a first item flowing from the first station through the supply chain.

15. (Allowed) The computer-implemented method of Claim 12, further comprising:

(h) based on at least part of the routing data, determining a quantity of the first type of item processed at a second station and a throughput of work in progress of the first type of item as the item flows from the first station; and

(i) displaying a portion of routing data, the number of the first type of item processed at another station in the supply chain, and the throughput of work in progress of the first type of item as the item flows from the first station to the other station in the supply chain.

16. (Allowed) The computer-implemented method of Claim 12, further comprising:

(h) displaying at least one work in progress decision with respect to the first type of item;

(i) receiving a user input corresponding to the work in progress decision; and

(j) implementing the work in progress decision with respect to the first type of item at the first station.

17. (Allowed) The computer-implemented method of Claim 16, wherein the work in progress decision is selected from a group comprising at least one of the following: decreasing the throughput of work in progress with respect to the first type of item, or increasing the throughput of work in progress with respect to the first type of item.

18. (Allowed) A computer-implemented method for determining a promise date for an incoming order, wherein the supply chain comprises at least one station, the method comprising:

(a) determining production time for an item at a station;

~~(b) determining setup time for the item at the station;~~

(c) determining cumulative available capacity;

(d) determining booked capacity;

(e) determining a difference between the cumulative available capacity and booked capacity, and adjusting the difference by at least the production time for an item at the station and setup time for the item at the station; and

(f) based in part on the difference, determining a minimum lead time for an incoming order.

19. (Allowed) The computer-implemented method of Claim 18, wherein (c) determining cumulative available capacity comprises determining available time for additional production of the item at the station over a predefined amount of time.

20. (Allowed) The computer-implemented method of Claim 18, wherein (d) determining booked capacity, comprises:

(1) determining a remaining time for each order after the station;

(2) determining a latest task completion date for each order at the station;

(3) determining order hours booked at the station over a predefined amount of time; and

(4) determining cumulative booked capacity at the station for a second predefined amount of time.

21. (Withdrawn) A computer-implemented method for managing a supply chain for multiple types of items, the method comprising:

(a) determining a flow path for each type of item in a supply chain, wherein each flow path comprises a plurality of operations;

~~(b) receiving performance data for each type of item at each operation;~~

(c) storing the performance data;

(d) processing the performance data to obtain a determination selected from a group comprising at least one of the following: an exchange curve, a lot size estimate, or a promise date; and

(e) displaying a portion of the performance data for the items and the determination.

22. (Withdrawn) A system for managing a supply chain for multiple types of items, comprising:

a flow path management system module adapted to:

determine a flow path for each type of item in a supply chain, wherein each flow path comprises a plurality of operations;

receive performance data for each type of item at each operation;

store the performance data;

process the performance data to obtain a determination selected from a group comprising at least one of the following: an exchange curve, a lot size estimate, or a promise date; and

display a portion of the performance data for the items and the determination.

23. (Allowed) The computer-implemented method of claim 1, wherein each potential inventory decision comprises a minimum cost to obtain a desired level of performance.

24. (Allowed) The computer-implemented method of claim 10, wherein each potential inventory decision comprises a minimum cost to obtain a desired level of performance.